

# PSYCHE

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## NEW SPECIES OF ASILIDÆ FROM SOUTHERN CALIFORNIA.<sup>1</sup>

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The species described in this article were all collected in San Bernardino County, California. There are many asilids in this region, and no great amount of collecting has been done since Coquillett worked over this section. Any extensive collecting is certain to bring to light new forms. In traveling only a short distance here, one will encounter a great variety of ecological conditions. There are many flowers at all seasons of the year and the mild climate permits of almost uninterrupted collecting. In the preparation of this paper the writer is indebted to Mr. Frederick Knab for the use of the National Museum collection, which contains much valuable type material in this group.

### *Cophura highlandica* sp. nov. (Plate VIII, fig. 4).

♀. Length, 7 mm. Head yellowish gray pruinose. Body black, mostly hidden by pollen. Front yellowish gray pollinose. Face gently convex. Mystax white and extending nearly to the antennæ. First joint of antenna slightly longer and more slender than second. Third joint four times as long as second, and slender. Style not very slender, rounded at end. Thorax gray and light brown pruinose. Two dark brown vittæ, broad in front and narrowed behind. Thorax very convex. A shining black spot above supra-alar groove and two of the same size just in front of

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scutellum. Bristles of thorax black. Fan-like row of bristles in front of halteres yellowish. Two large bristles on margin of scutellum near center, and two small ones outside of these. Abdomen shining black marked with yellowish gray pollen. Pile of thoracic dorsum very sparse. Pile of legs white, the bristles pale yellow and white. The pollinose bands on abdomen on each side reaching the posterior margin at sides. A black polished spot in center of each lateral patch of pollen. Tarsi black. Bases of tarsi, the tibiæ, and tips of femoræ reddish brown. Wings yellowish hyaline, the extreme apex brownish. Light clouds on veins at bases of discal, submarginal and posterior cells.

*Type*—U. S. N. M., Cat. No. 20185. One specimen.

*Habitat*—East Highlands, Cal., Nov. 25, 1914.

*Lestomyia redlandæ* sp. nov. (Plate VII, fig. 2).

♂. Length, 9 mm. General color blackish. Face and front black. Yellow pollen on face and along oral margin. Antennal triangle black, semi-shining. Mystax white (mostly broken off in this specimen). Scant pile on front near eyes. Two black bristles on underside of second antennal joint. Antennæ black with cylindrical arista which is more than twice as long as wide. The third segment of antennæ begins to widen some distance from base. Occipito-orbital bristles whitish. No markings on dorsum of thorax, which is pollinose. Thoracic bristles black and strong. Scutellum with six strong upcurved bristles on margin. There are three bristles on each side and they converge and cross each other. Halteres yellow. The fan-like row of bristles before the halteres is yellowish. Abdomen dark gray pruinose. There is a shining black spot on each side of second, third, fourth, fifth and sixth segments. Short recumbent white pile on dorsum of abdomen. Hypopygium brownish red, base shining black. Narrow rim on posterior margin of each abdominal segment a dull reddish color. Legs red. Some red color on coxæ. Black ring on all femoræ, broader on the hind ones. Tibiæ black except base. Spines on legs mixed black and white. Wings hyaline.

*Type*—U. S. N. M., Cat. No. 20186. Single specimen.

*Habitat*—Redlands, Cal., 1913.

**Lasiopogon drabicum** sp. nov. (Plate VIII, fig. 3).

♂, ♀. Length, 8–9 mm. Ground color black. Densely gray pollinose. The pollen of head and thorax with a yellowish tinge. A great deal of white pile on the body. Ocellar bristles black and white mixed and very slender. Occipito orbitals black. One black bristle above on second joint of antenna. The rest of the antennal bristles fine and white in color. Two very faint brown stripes on thoracic dorsum of ♀. Two dark brown widely separated stripes on thorax of ♂, wide at the shoulders and narrowing toward the center of the dorsum where it disappears. Pile of palpi white. In both ♂ and ♀ the pile of front is white and black mixed. Short white pile on thorax. Abdomen covered with short whitish oppressed pile, longer at lateral margins. The mystax black and white and quite heavy. Eighth abdominal segment of ♀ polished black. A circlet of black bristles on genitalia. Scutellum flat, with a semi-circular impressed line as in *arenicola*. Several spines on margin of scutellum, the stronger ones long, black and upcurving. Hypopygium black, slightly pollinose, and covered with white pile and black hair. Legs black, gray pollinose, with white pile and slender black bristles. Tarsi of ♂ dark reddish brown almost black in front. Tarsi of ♀ blackish. Wings grayish hyaline with brownish black veins. Venation normal, the anal cell closed. Anterior crossvein not much before middle of discal cell. In these specimens all the posterior cells wide open.

*Type*—U. S. N. M., Cat. No. 20183. One male and one female specimen.

*Habitat*—Redlands, Cal., 1913.

These small robberflies were collected on wild flowers, and one of them was observed capturing a small cecidomyiid.

**Metapogon pictum** sp. nov. (Plate IX, fig. 5).

♂. Length, 7 mm. General color black. First two segments of antennæ black, gray pruinose. Thorax grayish pollinose, the vittæ brown in color and coalescing. The brown markings vary in different specimens. Some of the spots are golden brown in color. In some specimens the brown markings do not extend to

the scutellum. Border of scutellum gray pruinose, yellowish in center. Abdomen yellowish gray pruinose, hind margins of all except last segment polished black, the last three narrowly. Anterior third of second segment polished black. Second, third, fourth, fifth, and sixth segments with a black spot on each side. The gray pruinose fasciæ on all the segments vary in size and shape, in all but the last segment running almost to the median line. The gray pruinose spots on the seventh segment are confined to the lateral margin. Meso, sterno, and pteropleuræ bare, and gray pruinose with golden brown spots. Scutellum rounded and with a subapical pair of stout bristles. Femora black, the tips of the middle and hind ones being gray pruinose in front. Knees dark reddish brown. Tibiæ and tarsi dark reddish brown. Legs very much darker beneath. White hairs on legs quite thick, the bristles strong and either brown or white. Halteres grayish brown, lighter at tip and base. Supra-alars reddish yellow, the rest of the thoracic bristles black. Antennal style about one third as long as third joint. Mystax mixed yellow and white. In two specimens the front pair of dorso centrals are partly reddish. Wings hyaline. Broad brown spots at base of discal, posterior and submarginal cells. Tip of wing brown. Genitalia polished black.

*Type*—U. S. N. M., Cat. No. 20184. Several paratypes in author's collection.

*Habitat*—East Highlands, Cal., February, 1915.

This species is quite close to *punctipennis* Coq., but the markings differ, and the spots of the wing are darker and more distinct. In *punctipennis* the tip of the wing is hyaline, and the base of the marginal cell has no brown color. The thoracic and scutellar bristles of *pictum* are black, those of *punctipennis* are yellowish. The tarsi of *pictum* are darker, and the knees black. In *punctipennis* the knees are red and the gray pruinose fasciæ on the abdomen are broader. A number of specimens of this new species were collected, most of the material being in the author's collection in California and not available for study. These small flies were collected on the dead twigs of sage brush (*Salvia mellifera*) and the wild alfalfa (*Lotus glaber*) so common in Southern California, and are not very quick on the wing.

**Lestomyia montis** sp. nov. (Plate IX, fig. 6).

♀. Length, 9 mm. Black or blackish in general color. Face black with white pollen on convexity. Mystax white. A black bristle on each side just above oral margin. Tuft of six black ocellar bristles. Yellowish white pile on each side of front. Antennæ black, gray pollinose. Four indistinct blackish stripes on dorsum of thorax. Gray and yellow pollen on thoracic dorsum. Fan-like row of bristles before halteres yellowish. Halteres yellowish. Abdomen black, gray pollinose. Black polished spot on each side of second, third, fourth, and fifth segments. Genitalia and most of sixth and seventh segments shining. Femora black. Tarsi brown. Femora red at tip and with a tinge of dark red color at base. Base and distal end of tibiæ black. Bristles on legs black. White bristles on coxæ. Thoracic bristles black and very long. Wings yellowish hyaline.

*Type*—U. S. N. M., Cat. No. 20187. One specimen.

*Habitat*—Bear Valley, Cal., June, 1913. Collected at an altitude of about 8,000 feet.

This species differs from *fraudiger* in the third joint of the antenna being more rounded. The front femora are black at the base.

**Nicoces lomæ** sp. nov. (Plate VII, fig. 1).

♂. Length, 11 mm. Ground color of thorax dark brown and black, thickly pollinose. Dorsum of thorax black, with a median narrow wedge of silvery pollen running to center of dorsum. Silvery pollen on sides of thorax just above dorso pleural suture and on pleuræ. Brown pollen on pleuræ and in front of scutellum. All abdominal segments shining yellowish red. The posterior margin of second segment of abdomen has a small lateral projection which is silvery pollinose above. Base of second segment shining black, and the narrow lateral margin darkened. Fifth abdominal segment not more than three times broader than long. Yellowish and silvery pollen on coxæ. Fifth and sixth segments bright silvery pollinose. Fourth segment slightly narrower than fifth. Abdomen with recumbent reddish yellow hair. Hypopygium small in type specimen. Face easily one-fourth entire width of head. Inner margin of eyes slightly converging near an-

tennæ. Face and front flat and thickly brown and silvery gray pollinose. Two rows of long reddish brown bristles on oral margin, a few long white hairs above, extending to antennæ. Ocellar bristles brown. Cilia of posterior orbit brown. Antennæ black, gray pruinose. First two joints of antennæ with brown bristles. One strong bristle beneath second joint. Third joint flat and slightly longer than first two joints together. Style rather slender acuminate, and less than half as long as third segment. Post-alars and supra-alars quite long and brown in color. White pile on scutellum and just in front of. Legs medium slender, rounded. Tibiæ and tarsi very spinose. Femora hairy. Hind metatarsi with many short strong spines beneath. Hind femora slender on basal two-thirds and with a club-like thickening toward the end. Hind tarsi thick and heavy. Metatarsus almost as long as three following joints. Legs reddish yellow, the tarsi dark brown distally. Front femora dark brown. Bristles of legs reddish yellow and pile white. Wings elongate and variegated with blackish brown, basal third being hyaline. Tip of anal cell blackish, posterior cells in part blackish. Fifth posterior cell all black. Hyaline spot in marginal cell. Discal cell all dark.

*Type*—U. S. N. M., Cat. No. 20200.

*Habitat*—Redlands, Cal., April, 1914.

There are three paratypes in the U. S. N. M. collection. These are all males. Two are labeled "Los Angeles Co., Cal., Coquillett," and in these the abdomen is more of a reddish color than in the type. The other specimen is labeled "September, Los Angeles Co., Cal." and is smaller and lighter in color than the others, the abdomen being yellow. These specimens are probably faded to some extent but agree very well with the type. As in the described specimen the venter is brown with silvery pollinose areas, and is thickly dotted with small dark brown spots. The wings are marked as in the type but are more of a brownish color. The type was taken on a sandy plot of ground in the foothills south of Redlands, Cal.

This species is quite close to *abdominalis*, but does not have the tinge of red on the thorax. The last segment of the abdomen is narrower, and the bluish black color of the abdomen is confined to the base of the first and second segments. In *lomæ* the brown of the wings is cut off sharply and does not spread into the basal

part of the wing. The arista of the antenna is more slender and sharper at the tip. The thoracic dorsum is dull and pollinose in the new species and shining in *abdominalis*.

#### EXPLANATION OF PLATES

##### *Plate VII.*

Fig. 1. *Nicocles lomæ* sp. nov.

a. Antenna, greatly enlarged.

Fig. 2. *Lestomyia redlandæ* sp. nov.

a. Antenna, greatly enlarged.

##### *Plate VIII.*

Fig. 3. *Lasiopogon drabecolum* sp. nov.

a. Antenna, greatly enlarged.

Fig. 4. *Cophura highlandica* sp. nov.

##### *Plate IX.*

Fig. 5. *Metapogon pictum* sp. nov.

a. Head from side.

b. Outline of head from front.

Fig. 6. *Lestomyia montis* sp. nov.

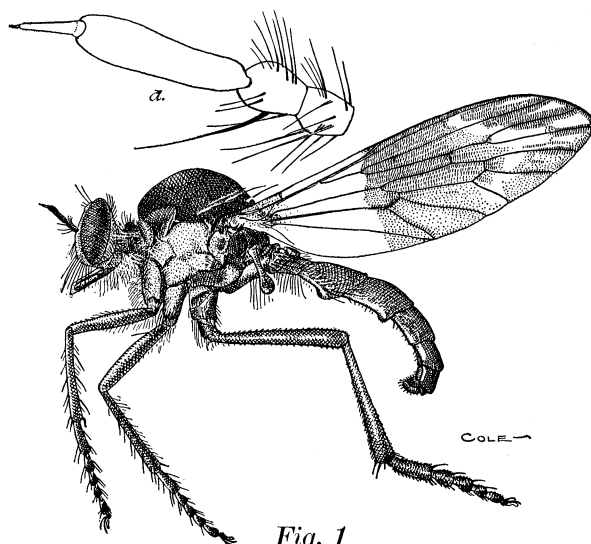
a. Antenna, greatly enlarged.

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#### PLASTER-CASTING INSECT BURROWS.

By R. P. Dow,  
New York City.

During my visits to J. Turner Brakeley, the hermit naturalist of Lahaway, N. J., we devoted much time to making plaster casts of burrows in the soil. Occasionally we tried the hole made by a snake, rat or even chipmunk, but for the most part our efforts were entomological. Great bare patches of sandy ground were, *par excellence*, insect homes. One hillside patch was the favorite haunt of *Myrmeleon* larvæ, their traps pitting every square foot of surface. The larvæ of *Cicindela* avoided such places, perhaps lest overpopulation should spell starvation. They had haunts of their own, some species, notably *C. lepida*, preferring absolutely



*Fig. 1*



*Fig. 2*

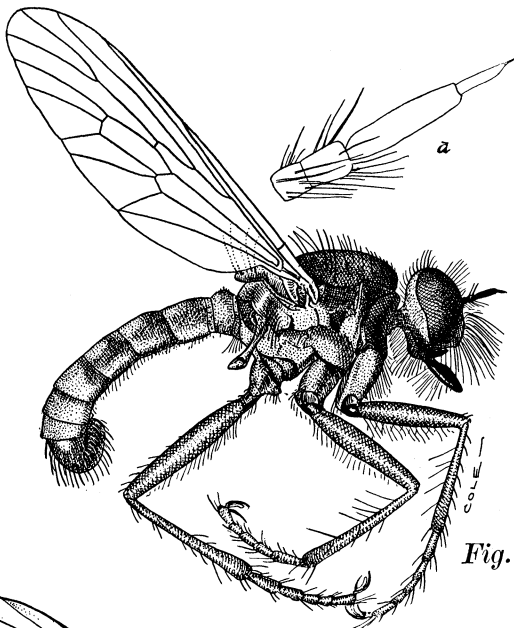


Fig. 3

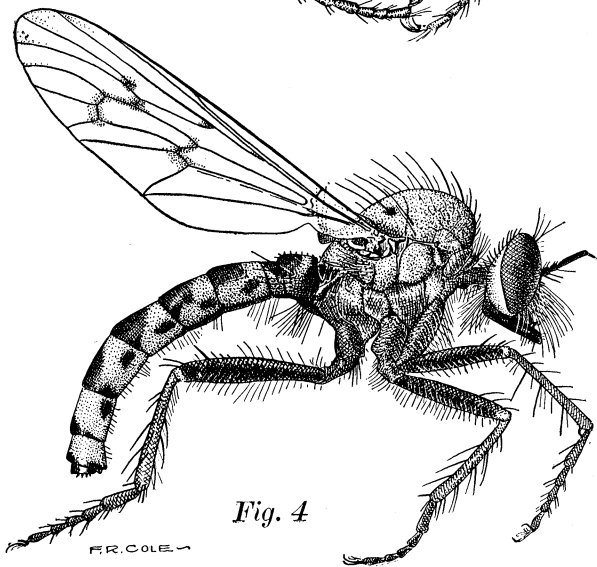


Fig. 4

